- **obtaining a commercial off-the-shelf geographic information system to replace our Bureau-developed system (from the 70's) and convert its data;**
- **obtaining a Windows-based survey instrument to replace the current DOS-based system and convert its surveys;**
- **modernizing our Computer-Assisted Telephone Interviewing systems;**
- **exploring the effects and uses of a web-based reporting option for demographic surveys;**
- **implementing security measures throughout the electronic data collection systems;**
- **determining to what extent we can apply the Decennial Data Capture system to other censuses and surveys;**
- **researching and using workflow systems in the survey environment;**
- **enabling the American FactFinder system to provide access to additional data sets and results of surveys (beyond the three currently provided); and**
- **researching the practical application of emerging technologies to the survey processes.**

This list of functions and capabilities demonstrates that this initiative allows the U.S. Census Bureau to make major strides toward transforming the Department of Commerce into a "Digital" Department, and positions us to meet the requirements of the Office of Management and Budget Paperwork Elimination Act.

It is imperative that the Department of Commerce endorse this initiative in FY 2001 so we can take advantage of the technologies and lessons learned during Census 2000 and begin work in several areas in a coordinated fashion.

Plan Overview

This Plan describes our progress over the past year in implementing the goals (and the updated strategies to attain these goals) presented in our 1999 Strategic IT Plan. These goals are customer-driven, are designed to advance technology and improve our information systems, and deal with the importance of enhancing the skills of our employees. Once again, we have developed the 2000 Operational IT Plan in full coordination with all program and support areas and it has been approved by the U.S. Census Bureau's Information Technology Review Board. This review process is fully outlined in the Introduction to the Plan.

In each section of the Plan, we describe a program area and give details about their business; their products, services, and customers; and, most importantly, how IT supports them and what IT resources they will need for Fiscal Years 2000 and 2001. Given the nature of the U.S. Census Bureau's work (i.e., censuses and surveys), new initiatives/ projects are not the norm; rather, up-

Consolidating workloads in a single site brings with it some risks that we can diminish with a comprehensive contingency plan for computer and telecommunication services and business continuity. A major IT activity is to develop such a plan that includes procedures to guide implementation at the application level. We completed our Contingency Plan study in FY 1999 and will implement a backup plan to include an alternate processing site prior to FY 2000. The current contingency plan covers only those operations in the Bowie Computer Center. We will continue to determine the alternative for contingency and disaster recovery that best meets the rest of our operations at other locations.

Program Area IT Support

Decennial Program Area

The Decennial program area is divided into six operational activities: Data Collection, Data Capture, Data Processing, Accuracy Coverage and Evaluation, Telephone Questionnaire Assistance, and Administrative Systems. The plan for Census 2000 incorporates government partnership, outreach, and the effective use of technology.

Due to a Supreme Court ruling, the U.S. Census Bureau cannot use statistical methods to determine Congressional Apportionments. Therefore, we will conduct a 100% Non-Response Follow-Up for those housing units that do not respond during the initial enumeration. This change will result in more personal visits in the field, more forms to be processed, and will require the Data Capture Centers to remain open longer to process the increased workload.

The U.S. Census Bureau must set up numerous temporary offices across the country to handle the large nationwide data collection effort. The major components of the national field infrastructure are 12 Regional Census Centers, 450 Census Field Offices, and 520 Local Census Offices. Not only must this foundation be able to complete an accurate enumeration in Census 2000, it must be effective and cost-efficient. By contracting out functions such as the Data Capture System and Data Capture Centers, we avoid the cost of purchasing equipment we will not need after Census 2000. Another added benefit will be the provided flexibility and scalability to handle the increased and changing requirements of conducting a traditional count census in the year 2000. Lastly, by using new technologies such as imaging and the Internet, we can gather and disseminate information more quickly.

The Data Product Production subsystem will provide an interactive interface for designing, reviewing and generating 1998 Dress Rehearsal and Census 2000 data products. In addition, this subsystem will, based on these data products, generate a number of file output formats for printing, for stamping to CD-ROM, and for on-line Intranet/Internet access through the American FactFinder. The current DADS architecture is based on a three-tier computing model. Each tier performs a specialized function and is connected to the other tiers via the Internet or U.S. Census Bureau Intranet. These tiers are client platforms, application servers, and database and map servers. The DADS computing environment is centrally located at the Bowie Computer Center; sources inside and outside the U.S. Census Bureau supply hardware and software support. The continued investment in hardware and software to implement DADS ensures that DADS will provide all required functional support to an expected large customer base.

The U.S. Census Bureau is in the preliminary fact-finding stages of an Integrated Information Solution (IIS) project, of which DADS will be a part. The project defines the details of how the U.S. Census Bureau should proceed from DADS development to the full vision of an integrated information access and dissemination system for internal and external users. DADS plays a major part in the U.S. Census Bureau's new world of "Electronic Commerce." We have included IIS activities in our Census Modernization initiative.

Demographic Program Area

The Demographic program area provides survey methodology, data processing, data dissemination, and data analysis services for its customers. The UNIX environment is now the primary production and analytical processing resource for the Demographic area. We will, in the next five years, expand our use of information technology to modernize and/or improve our business processes. These efforts will require obtaining or developing additional IT resources such as computing equipment, peripheral devices, and improved application software.

The Demographic Directorate has requested the new initiative to improve their survey processes, but they include no significant IT investments through 2001. They will benefit from the data collection and dissemination activities included in the Census Modernization initiative.

designed software will improve the functionality and integration of all the Computer-Assisted Interviewing technologies.

The National Processing Center, in Jeffersonville, IN, is a multi-functional data capture and processing site. To support its primary business, the National Processing Center currently maintains sixteen unique server and processing environments. The National Processing Center is a very large and logistically complex facility, and each survey environment requires a variety of hardware architecture and software system configurations. The National Processing Center has an ongoing requirement for life-cycle hardware replacement. Other IT-related requirements include additional microcomputers, file servers, and printers to support increased workloads as well as Local Area Network and software upgrades.

Census Modernization activities addressing updating assisted survey instruments, including replacement of the DOS-based survey instrument, will directly benefit the Field Operations program area.

Finance and Administration Program Area

The main business of Finance and Administration is to provide administrative support to the U.S. Census Bureau. This includes implementing, deploying, and maintaining all components of the Commerce Administrative Management System (CAMS), the Publications and Forms Design System, and systems in the Human Resources Division and Equal Employment Opportunity Office.

CAMS is the vehicle through which the U.S. Census Bureau will meet the requirements of the Chief Financial Officers Act, Government Management Reform Act, and the Acquisition Streamlining Act.

The current CAMS architecture, includeing telecommunications, is centralized and managed by the IT Directorate. Implementing an effective, integrated financial management system will help the Department of Commerce provide sound financial audits. The heightened implementation of CAMS and its accelerated deployment throughout the U.S. Census Bureau requires that we upgrade its architecture. Therefore, in FY 2000 we will update the current CAMS hardware and implement hardware updates in FY 2002. Between now and 2002 we will also increase our disk storage to keep up with system growth.

The Publications and Forms Design System is primarily decentralized; however, the IT Directorate provides mainframe/minicomputer and desktop resources. We are replacing hardware and software as new technology is introduced in the publications, graphics/forms design and production areas.

Milestones

We have included key milestones for IT activities, including acquisition time frames, for each program area to cover Fiscal Years 1998 through 2003. The fiscal year for milestones is determined by their estimated completion date, or actual completion date (if known) and different. We review these milestones for progress and/or completion at least quarterly throughout the year.

Performance Measures

The IT Directorate has developed its performance measures for Enterprise IT Support using the Balanced Scorecard. We have focused our measures on Operational aspects that link directly to our Strategic IT Goals and Strategies. The Operational Balanced Scorecard is comprised of those aspects that will meet the expectations of our customers, provide innovation and technical capabilities that will ensure workforce competency and meet U.S. Census Bureau business requirements, and reflect internal processes which the IT Directorate must excel in to deliver customer value and satisfaction. We have reported our current performance in the Enterprise IT Support section of this Plan.

Each program area has identified measures to assess performance improvements for their IT-related business. We have attempted to develop outcome measures that will indicate results of the initiatives in place. Many of the program areas are product-driven and therefore, have measures that are more output and time-oriented. We have come a long way toward understanding the intent of the Government Performance and Results Act and have put considerable effort into developing measures that will add value to U.S. Census Bureau programs. We have spent considerable time over the past year reviewing those performance measures that were originally reported in the 1999 Operational IT Plan. We discovered that there were many measures that were not IT-related and we have revised those measures accordingly. We developed the associated metrics and continue to establish the baselines necessary to determine if the measures are valid and reportable. Where we have baseline data, we have reported our progress in the respective program area sections of this Plan.

Risks

There are two prevalent risks that continue to remain foremost in the program areas:

The first risk is obtaining and retaining qualified programmers and support staff. It continues to be difficult to compete with the current labor market. We are mitigating this risk by defining clear career paths and certification programs for our employees. We will also take advantage of incentive programs that are offered through Office of Personnel Management and the Department of Commerce. In addition to relying on the U.S. Census Bureau's internal work

Solving the Y2K Problem

We successfully met the Office of Management and Budget's March 31, 1999 deadline for fixing and testing 60 mission critical systems for Year 2000 readiness. In addition, we have completed scanning approximately 6,000 desktop PCs and some 3,000 notebook PCs using the Check 2000 Client Server package from Greenwich Mean Time UTA.

A contractor is performing independent validation and verification of mission critical systems that we have reported as compliant; this effort will continue throughout the calendar year.

We have included information on our Y2K efforts in Appendix B of this Plan.

Security

The U.S. Census Bureau fully complies with the Department of Commerce's IT Security program requirements. The ADP Security Branch of the Finance and Administrative Directorate maintains a current inventory of all sensitive systems within the U.S. Census Bureau, ensuring that security plans, risk assessments, and contingency planning documents are current. We have provided detailed information on our security program in Appendix C of this Plan.

We are participating with the Department of Commerce in a national evaluation of our critical infrastructure. The identification of the critical components is currently underway; that is to be followed by implementing a protection plan. This Operational IT Plan, and its accompanying budget request, cannot include funding requests for that which is still undefined. We are taking a variety of actions to protect our systems and networks, but specific implementation of a Critical Infrastructure Protection Plan may require additional funding.

Concluding Remarks

Whether employees are assessing survey results, answering customer questions or providing services for economic and statistical data, the quality, accuracy and efficiency of their efforts depend on their ability to quickly and accurately access and organize information in a useful format, and disseminate data using IT products and services. With this in mind, the U.S. Census Bureau is focusing on a strategic direction to develop an IT environment for itself, our business partners and the public, where economic and statistical information is collected and captured cheaply and accurately, managed effectively, used often and quickly disseminated. The U.S. Census Bureau will evolve over time to electronic collection and dissemination, whereby most internal and external transactions are performed online. These changes that are occurring within the U.S. Census Bureau are rapid and dynamic. This document is clearly designed to be the plan for operational improvements within the IT environment of the U.S. Census Bureau.